

REMARKS

This Amendment is responsive to the Office Action dated March 16, 2010. Applicant has cancelled claims 1–34 and added claims 35–63. Claims 35–63 will be pending upon entry of this Amendment.

Claim Rejection Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 1, 2, 5, 9, 10, 12–17 and 19–28 under 35 U.S.C. § 103(a) as being unpatentable over Unger (U.S. Patent No. 3,724,455) in view of Rockwell et al. (U.S. Patent No. 6,141,584, hereinafter “Rockwell”). In addition, the Examiner rejected claims 3, 18 and 30 under 35 U.S.C. § 103(a) as being unpatentable over Unger in view of Rockwell and further in view of Saper et al. (U.S. Patent No. 3,865,101, hereinafter “Saper”); claims 4, 6 and 32 under 35 U.S.C. § 103(a) as being unpatentable over Unger in view of Rockwell and further in view of Snell (U.S. Patent No. 6,978,181); claims 7, 8, 11, 33 and 34 under 35 U.S.C. § 103(a) as being unpatentable over Unger in view of Rockwell and further in view of Khair et al. (U.S. Patent No. 6,441,747); and claim 31 under 35 U.S.C. § 103(a) as being unpatentable over Unger in view of Rockwell and further in view of Covey et al. (U.S. Patent Publication No. 2004/0162586).

Applicant has cancelled claims 1–34 and presented new claims 35–63, rendering these rejections moot. Nevertheless, Applicant respectfully traverses the rejections to the extent such rejections may be considered applicable to the new claims. The applied references fail to disclose or suggest the features defined by Applicant’s claims, and there is no apparent reason for further modification to arrived at the claimed features.

While Applicant does not agree with the Office Action’s conclusion of obviousness, Applicant has amended the claims to advance allowance of the claims. Nothing in the applied references discloses or suggests the features of the amended claims. For example, nothing in the applied references disclose or suggests the features of independent claim 35.

Independent claim 35 recites a modular external defibrillator system for treating a patient that includes a base, a first pod, and a second pod. The base contains a display and an external defibrillator module configured to deliver a defibrillation shock to the patient. The first pod is operable when separated from the base, the first pod having a first patient parameter module and connectable to the patient to collect first patient data related to at least a first patient vital sign,

the first pod capable of wirelessly transmitting the first patient data to the base. The second pod is operable when separated from the base, the second pod having a second patient parameter module and connectable to the patient to collect second patient data related to at least a second patient vital sign independent from the first vital sign, the second pod capable of wirelessly transmitting the second patient data to the base. According to claim 35, when one of the first or the second patient data is transmitted to the base, the base is configured to display an aspect of the transmitted one of the first or the second patient data.

Unger in view of Rockwell does not disclose or suggest the features of claim 35. For example, Unger in view of Rockwell does not disclose or suggest a system that includes a first pod connectable to a patient to collect first patient data related to at least a first patient vital sign and a second pod connectable to the patient to collect second patient data related to at least a second patient vital sign independent from the first vital sign, as recited by independent claim 35.

In support of the rejection of the previously presented claims, the Office Action characterized units 20, 22, and 24 of Unger as two or more pods each connectable to a patient.¹ The Office Action further characterized central facility 34 of Unger as a base, and asserted that Unger establishes a wireless communication link between the central facility 34 and a selected one of units 20, 22, and 25 to carry patient data from the select unit to the central facility. Based on these characterizations, the Office Action concluded that Unger discloses the pods recited by the previously presented claims.

Applicant submits that units 20, 22, and 24 of Unger cannot reasonably be characterized as the first pod and the second pod required by claim 35. According to Unger, units 20, 22, and 24 are “portable, self contained and powered unit[s] which monitors [individuals’] ECG waveforms continuously and responds to conditions which appear to be herald signs.”² Unger further states that units 20, 22 and 24 are “intended to be identical.”³ Therefore, Unger only appears to disclose three identical units that each monitor ECG waveforms. Claim 35, on the other hand, requires a first pod connectable to a patient to collect first patient data related to at least a first patient vital sign and a second pod connectable to the patient to collect second patient data related to at least a second patient vital sign independent from the first vital sign. Based at

¹ Office Action dated March 16, 2010, at page 2.

² Unger at col. 3, lines 32–34.

³ See *id.* at col. 3, line 38.

least upon this difference between the pods of claim 35 and the units of Unger, Unger in view of Rockwell does not disclose or suggest the features of claim 35.

In addition, Unger in view of Rockwell does not disclose or suggest a system that includes a base containing a display and an external defibrillator module configured to deliver a defibrillation shock to a patient, a first pod capable of wirelessly transmitting a first patient data to the base, and second pod capable of wirelessly transmitting a second patient data to the base, as recited by claim 35.

With respect to the previously presented claims, the Office Action characterized central facility 34 of Unger as a base and cited column 4, lines 52–54 of Unger for the proposition that central facility 34 of Unger is operably coupled to a defibrillator.⁴ The Office Action acknowledged the Unger does not disclose a base containing a defibrillator but then Rockwell to overcome this deficiency.⁵ The Office Action characterized Rockwell as teaching a base containing a defibrillator.⁶ The Office Action then asserted that it would have been obvious to modify the defibrillator and base as taught by Unger with the base containing the defibrillator as taught by Rockwell “since such a modification would provide the predictable results [of] allowing the pods to communicate directly with the device that contains the defibrillator and provide a more reliable wired connection.”⁷ Applicant respectfully disagrees with the characterization of Unger and the modification of Unger in view of Rockwell, as proposed in the Office Action.

Central facility 34 of Unger cannot reasonably be characterized as the base required by claim 35. While Unger describes that central facility 34 “receives the signals transmitted by unit 24,”⁸ central facility 34 only appears to be a physical location for housing personnel and equipment. For example, Unger describes that a human expert studies an ECG on a monitor, and if he considers the situation to warrant precaution, he can direct manual activation of a transmitter from facility 34.⁹ Unger further states that a user can contact center 34 when a personal physician is unavailable.¹⁰ For instance, Unger describes that a patient can replay a tape

⁴ Office Action dated March 16, 2010, at page 2–3.

⁵ *Id.* at page 3.

⁶ *Id.*

⁷ *Id.*

⁸ *Id.* at col. 4, lines 12–13.

⁹ See *id.* at col. 3, lines 37–40, 54–55.

¹⁰ See *id.* at col. 4, lines 48–50.

into a telephone line after a patient calls the central facility.¹¹ However, because central facility 34 is only a physical location, Applicant submits that central facility 34 cannot reasonably be characterized as a base containing a display and an external defibrillator module, as included in claim 35. In particular, central facility 34 cannot reasonably be characterized as a base that is part of a system in which a first pod is operable when separated from the base, a second pod is operable when separated from the base, and where when one of a first or the second patient data is transmitted to the base, the base is configured to display an aspect of the transmitted one of the first or the second patient data, as per claim 35.

In addition, Applicant traverses the proposed modification of Unger in view of Rockwell because the modification would render the Unger system unsuitable for its intended purpose. In the Office Action, the Examiner characterized Rockwell as teaching a base containing a defibrillator and asserted that it would have been obvious to modify the defibrillator and base as taught by Unger with the base containing the defibrillator as taught by Rockwell. In other words, the Office Action asserted that it would have been obvious to modify the Unger system so that central facility 34 of Unger (characterized as a base in the Office Action) contains the defibrillator disclosed by Unger. Applicant respectfully disagrees.

According to Unger, the Unger invention provides a method whereby a number of individuals known to be cardiacs or potential cardiacs are each equipped with a portable unit which they carry on their person or with their person and which constantly monitors ECB waves for herald signs.¹² These units of Unger (characterized as pods by the Office Action) may contain a defibrillator.¹³ In operation, Unger describes that ECG waves from the units may be transmitted to a central facility, studied by a human expert, and, if ventricular fibrillation is detected, the human expert may trigger the defibrillator in the portable unit by transmitting a signal from the central facility.¹⁴ In this manner, Unger claims to provide a system for detecting and responding to herald signs in the cardiac waveform.¹⁵

In contrast to the disclosed operation of Unger, the Office Action proposed modifying Unger so that central facility 34 contains the defibrillator disclosed by the reference. Yet if the Unger system were so modified, central facility 34 would contain the defibrillator and Unger

¹¹ See *id.* at Abstract.

¹² See Unger at col. 1, lines 37–42.

¹³ See *id.* at col. 4, lines 42–54.

¹⁴ See *id.* at col. 1, lines 42–64; col. 4, lines 37–59.

¹⁵ See *id.* at Abstract.

would no longer be able to transmit a signal to remotely trigger the defibrillator in the portable unit. This modification would render the Unger system unsuitable for its intended purpose of remotely detecting and responding to herald signs in the cardiac waveform. Accordingly, the modification would not have been made by a person of ordinary skill in the art, and the modification is insufficient to support the legal conclusion of obviousness.¹⁶

For at least the reasons given above, Unger in view of Rockwell does not disclose or suggest the features of independent claim 35. Furthermore, none of the additional cited references overcome the basic deficiencies evident in the combination of Unger in view of Rockwell, as set forth above.

Independent claim 50 recites a method for a modular external defibrillator system for treating a patient, the system including: a base containing a display and an external defibrillator module configured to deliver a defibrillation shock to the patient, a first pod operable when separated from the base, the first pod having a first patient parameter module and connectable to the patient to collect first patient data related to at least a first patient vital sign, the first pod capable of wirelessly transmitting the first patient data to the base, and a second pod operable when separated from the base, the second pod having a patient parameter module and connectable to the patient to collect second patient data related to at least a second patient vital sign independent from the first vital sign, the second pod capable of wirelessly transmitting the second patient data to the base. The method of claim 50 includes selecting one of the first or the second pods over the other, establishing a communications link between the base and the selected pod, in which the one of the first or the second patient data collected by the selected pods is transmitted wirelessly to the base, and displaying at the display an aspect of the transmitted one of the first or the second patient data.

Accordingly, for at least the reasons given above with respect to independent claim 1, independent claim 50 is also patentable over the references of record.

Claims 36–49 and 51–63 depend from independent claims 35 or 50 and are therefore patentable for at least the reasons given above with respect to independent claims 35 and 50, as well as upon additional patentable features and elements claimed in dependent claims 36–49 and 51–63. Applicant addresses some of the additional reasons for patentability of the dependent claims for purposes of illustration.

¹⁶ See MPEP § 2143.01(V).

Claim 37 recites the system of claim 35 in which the first pod contains an interpretive algorithm to analyze a patient condition based on the first patient data. In support of the rejection of previously presented claim 13, which recited wherein at least one of a base and a pod contain interpretive algorithms to analyze a patient condition based on a patient data, the Office Action cited column 4, lines 13–20 of Unger.¹⁷ The Office Action asserted that the cited portion of Unger discloses a computer 38 programmed to analyze an ECG wave form and “it is understood that interpretive algorithms exist in the computer.” Alternatively, the Office Action asserted that interpretive algorithms are “well known in the art” and that it would have been obvious to modify the programmed computer taught by Unger to provide the predictable results of accurately analyzing patient data.

To the extent that the rejection of previously presented claim 13 may be considered applicable to new claim 37, Applicant notes that computer 38 is described in Unger as part of central facility 34 (characterized as a base) and not part of units 20, 22, or 24 (characterized as pods in the Office Action).¹⁸ In claim 37, the first pod contains an interpretive algorithm. Therefore, the cited portion of Unger does not disclose the features of claim 37.

Nor does Unger suggest the features of claim 37. In Unger, analysis by computer 38 at central facility 34 is necessary to provide output for a human expert to study.¹⁹ Specifically, Unger indicates that a defibrillator in the Unger system can only be triggered after human expert study, after which the expert manually directs activation of a transmitter to transmit a trigger signal.²⁰ Accordingly, Unger also does not suggest the features of claim 37.

To the extent that the alternative rejection of “well known in the art” may be considered applicable to new claim 37, Applicant traverses the assertion of “well known in the art.” Applicant submits that the facts asserted to be well-known are not capable of instant and unquestionable demonstration as being well-known, and, accordingly, the assertion of knowledge in the art is inappropriate without citing a prior art reference.²¹ Moreover, claim 37 requires not only an interpretive algorithm but a first pod containing an interpretive algorithm, where the first pod is included in a modular external defibrillator system for treating a patient. Neither Saper, Rockwell, nor any other reference of record suggests that an interpretive

¹⁷ Office Action dated March 16, 2010, at page 4.

¹⁸ See Unger at FIG. 1.

¹⁹ See Unger at col. 4, lines 22–25.

²⁰ See *id.* at col. 4, lines 37–59.

²¹ See MPEP 2144.03.

algorithm is known as part of a system that includes a first pod containing an interpretive algorithm, as included in claim 37.

As another example of the patentability of the dependent claims, Unger in view of the references of record does not disclose or suggest a system that is configured to select one of a first or a second pod over the other to transmit to a base patient data the selected pod collects, as recited by claim 40. Unger does not describe a system that is configured to select one of a first or a second pod over the other to transmit to the base patient data. Nor would such a feature make sense based on the operation of the Unger system. As outlined above, Unger is directed toward a system in which “a number of individuals with established cardiac difficulties or who are cardiac prone are each equipped with a portable, self contained and powered unit which monitors their ECG waveforms continuously and responds to conditions which appear to be herald signs.”²² Unger further states that each of the different units is “intended to be identical.”²³ Accordingly, the only difference between different units in Unger appears to be different patients. Selecting one of a first or second unit over the other to transmit patient data to central facility 34 would not make sense with both patients exhibiting herald signs that require expert study at central facility 34.²⁴ Applicant therefore submits that claim 40 is patentable over the references of record for this additional reason. Claims 41–49 ultimately depend from dependent claim 40 and are likewise patentable over the references of record for the additional reasons presented with respect to claim 40.

As another example, Unger in view of the references of record does not disclose or suggest a system in which, when a base and a selected pod are communicating wirelessly over a link, if the link degrades, either one of the base or the selected pod is configured to provide an alert or less patient data is carried to the base, as recited by claims 46 and 47, respectively. Unger in view of the references of record also does not disclose or suggest a system in which, when a base and a selected pod are communicating wirelessly over a link, if the link is lost, the system is configured to output an alarm, as recited by claim 48.

In support of the rejection of previously presented claim 8, which recited a system wherein one of a base and a selected pod provides an alert if a wireless communications link

²² Unger at col. 3, lines 30–34 (emphasis added).

²³ *See id.* at col. 3, line 38.

²⁴ *See id.* at col. 4, lines 21–59.

degrades, the Office Action cited Unger in view of Rockwell and in further view of Khair.²⁵ The Office Action asserted that Khair teaches that it is known to have a wireless device enter a power saving mode, alert a user, and restrict data when a communication link is lost or degraded.²⁶ The Office Action further asserted that it would have been obvious to modify the invention taught by Unger in view of Rockwell as taught by Khair since such a modification would provide the predictable results of allowing a user to quickly reestablish a communication link between a base and a pod in case the link is lost.²⁷

To the extent that the rejection of previously presented claim 8 may be considered applicable to any of new claims 46, 47, or 48, Applicant respectfully traverses the characterization and combination of references. The portion of Khair cited in the Office Action is reproduced below:

f. Battery utilization sleep/activation mode procedure. The battery utilization sleep mode procedure of FIG. 16 will be used during shut-down process for conservation of battery power. This can also be initiated if signal communication is lost between the electrodes and the base unit, or on command from the base unit. Battery utilization activation mode will be initiated as soon as communication with the electrodes is resumed or during initialization of registration of new electrodes. The procedure involves the base unit sending a battery audit request message 220 to the electrode. The message 220 basically asks the electrode to provide battery life and current battery mode information. This information is provided back to the base unit in a battery audit response message 222.

g. Battery low voltage level detection procedure. A battery status audit procedure shown in FIG. 17 is for a condition of low battery voltage in the wireless transceiver 20 to be detected by the base unit. The procedure allows the base unit to warn the user for replacing or recharging that electrode battery. When the voltage of battery 46 of FIG. 3 goes below a threshold level (as monitored by the microcontroller), the electrode sends a low battery detected message 224 to the base unit.

h. Power Saving Mode Setting. The procedure shown in FIG. 18 allows the base unit to change the power saving mode of the wireless transceivers to conserve battery life and be more economical. Different levels of power saving modes can be selected based on the needs of the operation. A memory retention sleep mode can also be implemented in the wireless transceiver. The system can also have a wake up timer or change to active mode at the command of the base unit. The

²⁵ Office Action dated March 16, 2010, at page 7.

²⁶ *Id.*

²⁷ *Id.*

base unit sends a power saving mode set command 226. The electrode responsively changes the state of the battery 46 to a sleep or power saving mode, and when that is accomplished sends back a power saving mode complete message 228 back to the base unit.²⁸

As seen above, the portion of Khair cited by the Office Action does not discuss wireless link degradation or a system response if a link degrades. Further, while the cited passage of Khair note that a sleep mode procedure can be initiated for the Khair system if signal communication is lost between electrodes and base unit, Khair does not disclose or suggest an output alarm if a wireless communication link is lost. Thus, contrary to the assertion in the Office Action, Khair does not support the proposition that “it is known to have a wireless device enter a power saving mode, alert a user, and restrict data when a communication link is lost or degraded.” Therefore, independent of the propriety of combining and modifying Unger in view of Rockwell and further in view of Khair, Applicant submits that Unger in view of Rockwell and further in view of Khair does not render claims 46, 47, and 48 unpatentable.

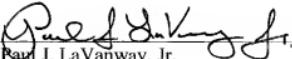
In view of claim amendments and the fundamental differences between the claims and the references of record identified above, Applicant reserves further comment concerning the additional features set forth in the dependent claims. However, Applicant does not acquiesce in the propriety of the Office Action’s application or interpretation of the references with respect to the previously presented claims, and reserves the right to present additional arguments in any further prosecution of this application.

²⁸ Khair at col. 14, line 60 – col. 15, line 30 (emphasis added).

CONCLUSION

All claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number 50-1778. The Examiner is invited to telephone the below-signed attorney to discuss this application.

Date:
June 16, 2010
SHUMAKER & SIEFFERT, P.A.
1625 Radio Drive, Suite 300
Woodbury, Minnesota 55125
Telephone: 651.286.8386
Facsimile: 651.735.1102

By: 
Name: Paul J. LaVanway, Jr.
Reg. No.: 64,610